WHAT IS CLAIMED IS:

1. An electronic control unit for controlling an actuator with a microcomputer, comprising:

a monitoring circuit including a communicating unit for transmitting an assignment number to the microcomputer and receiving an answer from the microcomputer, and a comparing/judging unit for comparing the answer with a correct answer for checking the microcomputer,

wherein the microcomputer performs a predetermined self-function check operation in accordance with the assignment number, and transmits an operation result thereof as an answer.

2. The electrical control unit according to claim 1, wherein the monitoring circuit judges that the microcomputer is in an abnormal state when the monitoring circuit receives no answer within a predetermined time after transmitting the assignment number to the microcomputer or when non-coincidence between the answer and the correct answer is judged sequentially a predetermined number of times.

3. The electrical control unit according to claim 1, wherein the microcomputer intentionally transmits to the monitoring circuit an answer containing a wrong operation result at a predetermined frequency to thereby check the function of the monitoring circuit.

4. The electrical control unit according to claim 1, wherein when the monitoring circuit judges the microcomputer to be in an abnormal state, the monitoring circuit places the microcomputer into a drive prevention state.

5. The electrical control unit according to claim 1, wherein the monitoring circuit includes a circuit for judging whether the microcomputer is restored to a normal state after having once judged that the microcomputer is in an abnormal state.

6. The electrical control unit according to claim 5, wherein the circuit judges whether there is a coincidence between the answer and the correct answer sequentially for a predetermined number of times.

7. The electrical control unit according to claim 5, wherein when a normal restoration signal is received, the means to judge whether the microcomputer is restored to the normal state judges that the microcomputer is restored to the normal state.

8. The electrical control unit according to claim 5, wherein the monitoring circuit limits the frequency at which the microcomputer can be judged to be restored to the normal state to a predetermined frequency.

9. The electrical control unit according to claim 5, wherein the monitoring circuit puts the microcomputer into an abnormal state when a power supply source is turned on.

10. The electrical control unit according to claim 5, wherein the monitoring circuit allows the microcomputer to be in an actuator-driving state and ceases to note the function abnormality when the monitoring circuit judges the microcomputer to be restored to the normal state.

11. The electrical control unit according to claim 1, wherein when the monitoring circuit judges the microcomputer to be in an abnormal state, the monitoring circuit resets the microcomputer to restart the microcomputer.

12. The electrical control unit according to claim 11, wherein the monitoring circuit limits the frequency at which the microcomputer is reset to be restarted to a predetermined number of times, and fixedly resets the microcomputer when the reset/restart frequency of the microcomputer exceeds the predetermined number of times.

13. The electrical control unit according to claim 4, wherein after the microcomputer is reset and restarted, the microcomputer intentionally transmits an answer of a wrong operation result in response to the assignment number at least once to check whether the monitoring circuit makes an accurate

judgment on abnormality of the microcomputer and surely executes abnormality processing.

14. An electronic control unit for controlling an actuator with a microcomputer, comprising:

a monitoring circuit including an assignment number selecting unit for selecting an assignment number, a communicating unit for transmitting the assignment number selected by the assignment number selecting unit to the microcomputer and receiving an answer from the microcomputer, and a comparing/judging unit for comparing the answer with a correct answer to check the function of the microcomputer,

wherein the assignment number selecting unit renews the assignment number to a next assignment number when the answer and the correct answer are judged to be coincident with each other in the comparing/judging unit, and selects the same assignment number as a next assignment number when the answer and the correct answer are judged to be non-coincident with each other in the comparing/judging unit ; and

the microcomputer performs a predetermined self-function check operation in accordance with the assignment number received, and transmits an operation result as the answer.

15. The electrical control unit according to claim 14, wherein the monitoring circuit judges that the microcomputer is in an abnormal state when the monitoring circuit receives no answer within a predetermined time after transmitting the

assignment number to the microcomputer or when non-coincidence between the answer and the correct answer is judged sequentially a predetermined number of times.

16. The electrical control unit according to claim 14, wherein the microcomputer intentionally transmits to the monitoring circuit an answer containing a wrong operation result at a predetermined frequency to thereby check the function of the monitoring circuit.

17. The electrical control unit according to claim 14, wherein the monitoring circuit includes a circuit for judging whether the microcomputer is restored to a normal state after having once judged that the microcomputer is in an abnormal state.

18. The electrical control unit according to claim 17, wherein the circuit judges whether there is a coincidence between the answer and the correct answer sequentially for a predetermined number of times.

19. The electrical control unit according to claim 17, wherein the monitoring circuit limits the frequency at which the microcomputer can be judged to be restored to the normal state to a predetermined frequency.

20. The electrical control unit according to claim 17, wherein the monitoring circuit puts the microcomputer into an abnormal state when a power supply source is turned on.

21. The electrical control unit according to claim 17, wherein the monitoring circuit allows the microcomputer to be in an actuator-driving state and ceases to note the function abnormality when the monitoring circuit judges the microcomputer to be restored to the normal state.

22. The electrical control unit according to claim 14, wherein when the monitoring circuit judges the microcomputer to be in an abnormal state, the monitoring circuit resets the microcomputer to restart the microcomputer, wherein the monitoring circuit limits the frequency at which the microcomputer is reset to be restarted to a predetermined number of times, and fixedly resets the microcomputer when the reset/restart frequency of the microcomputer exceeds the predetermined number of times.

23. The electrical control unit according to claim 16, wherein when the monitoring circuit judges the microcomputer to be in an abnormal state, the monitoring circuit places the microcomputer into a drive prevention state, and wherein after the microcomputer is reset and restarted, the microcomputer intentionally transmits an answer of a wrong operation result in response to the assignment number at least once to check

whether the monitoring circuit makes an accurate judgment on abnormality of the microcomputer and surely executes abnormality processing.